



Dr Jean-Pierre COSSA CMC Georges Bizet / PARIS

AGRAFAGE DES PROTHESES: NOUVEAUTES



MESH 14 juin 2013



L'ÈRE DU RESSORT...

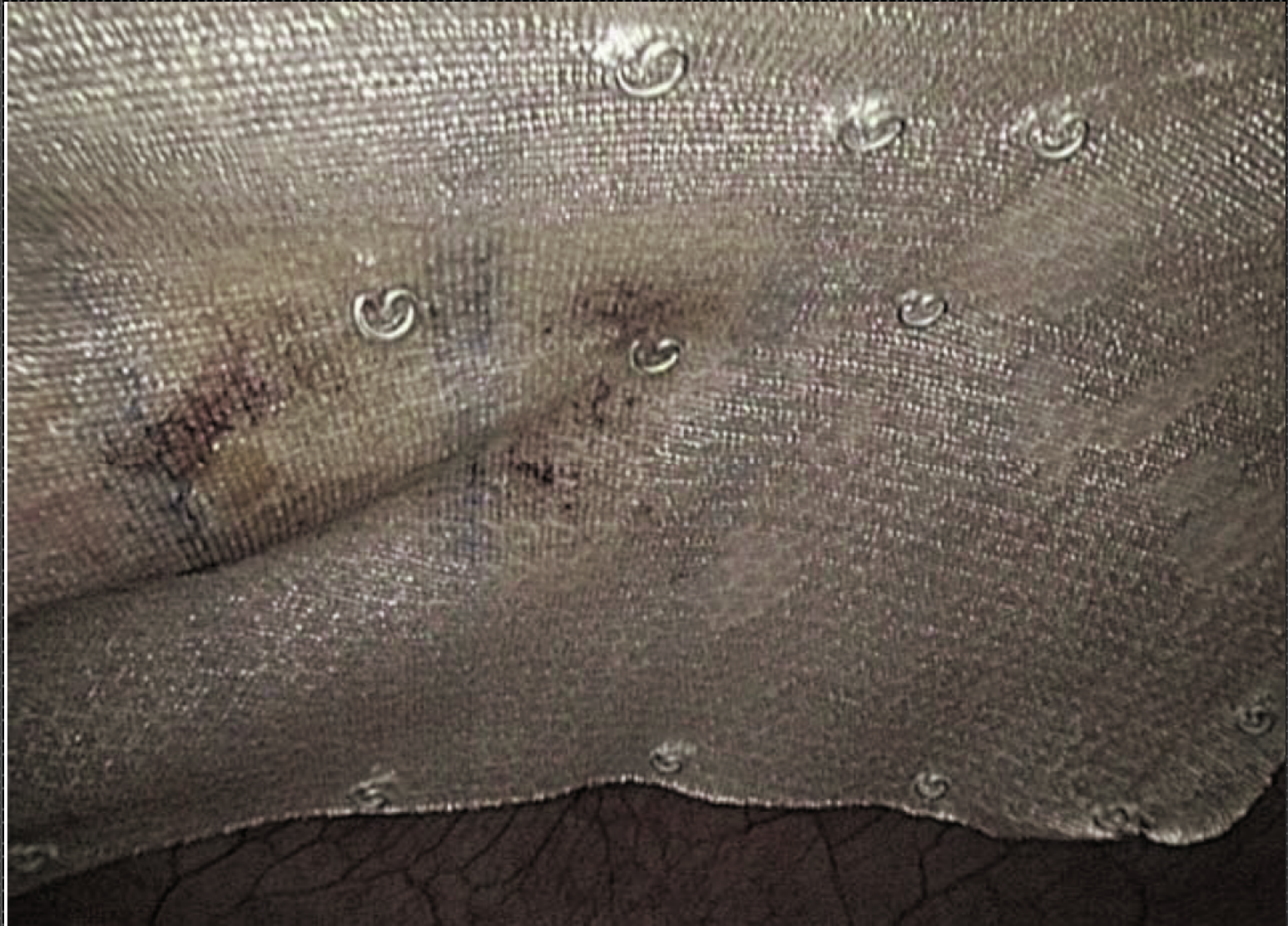


Various fixation devices : Protack

- Titanium helical tack
- Fixates by spiraling into tissue
- Titanium, non-resorbable
- 3.7 mm length
- 5 mm trocar



LA SOLUTION...??



TACKER VERSUS RESTE...

La force d'ancrage d'un Tacker hélicoidal est 4 fois supérieure à celle d'une agrafe conventionnelle

Hollinsky C, Goebels S

Bursting strength evaluation after different types of mesh fixation in laparoscopic hernioraphy

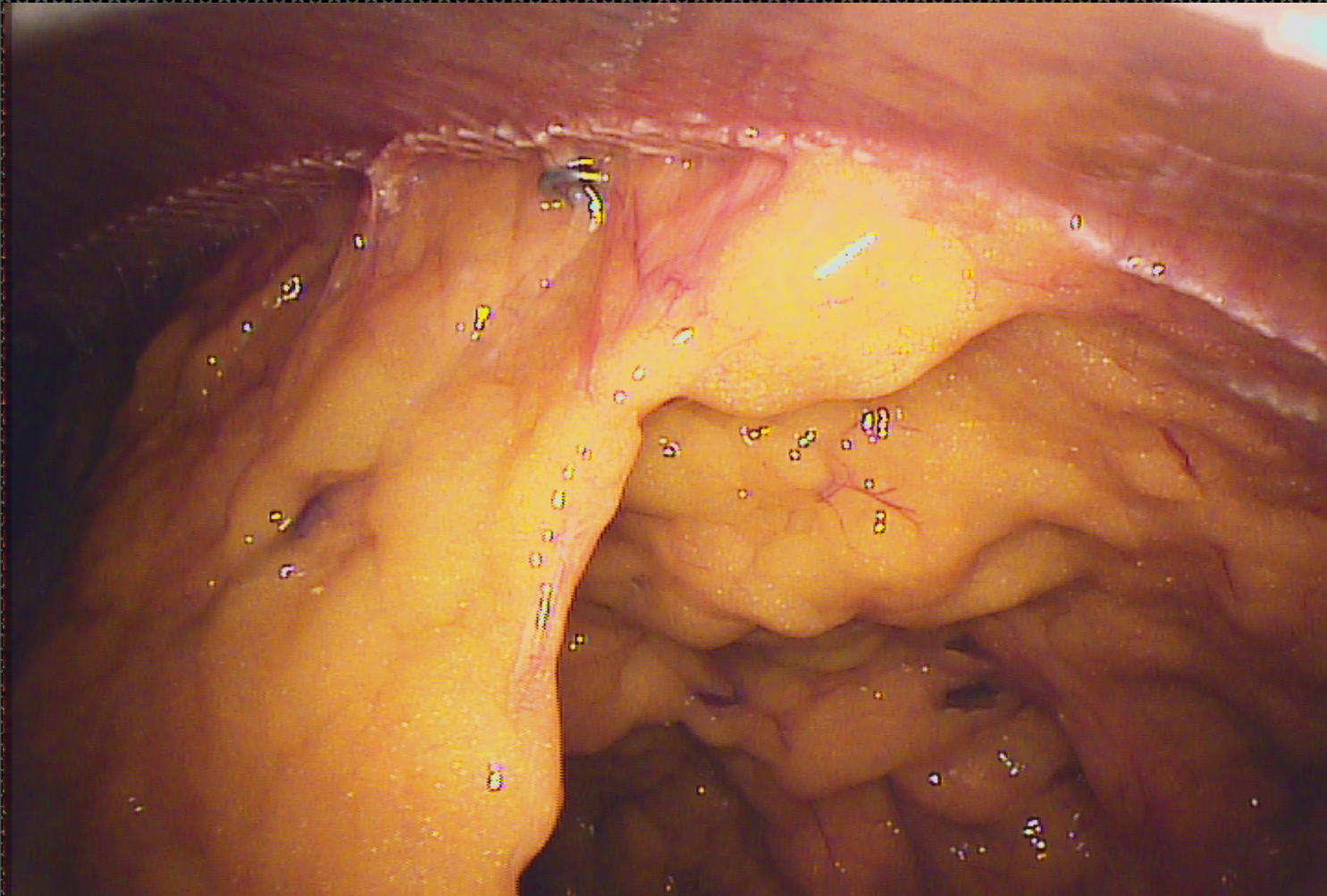
Surg Endosc 1999; 13: 958-61

DOULEUR POST-OPÉRATOIRE

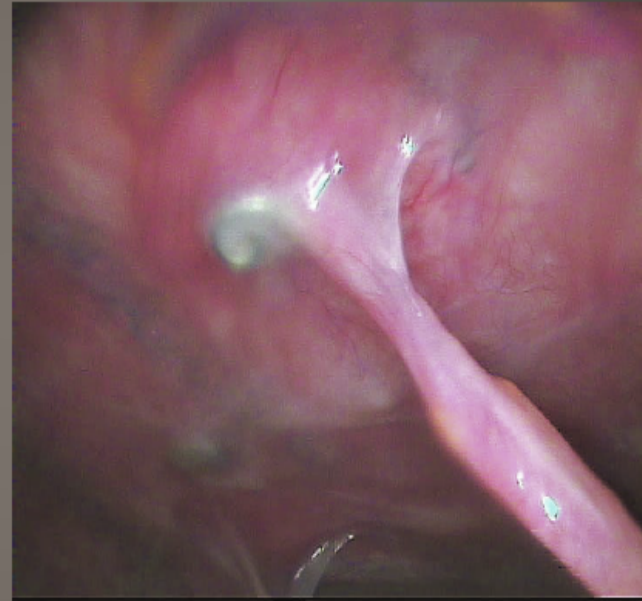
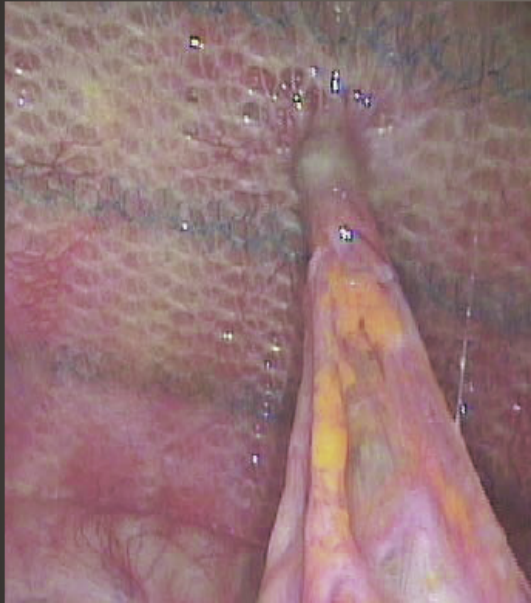
✘ « Docteur, j'ai mal ! »



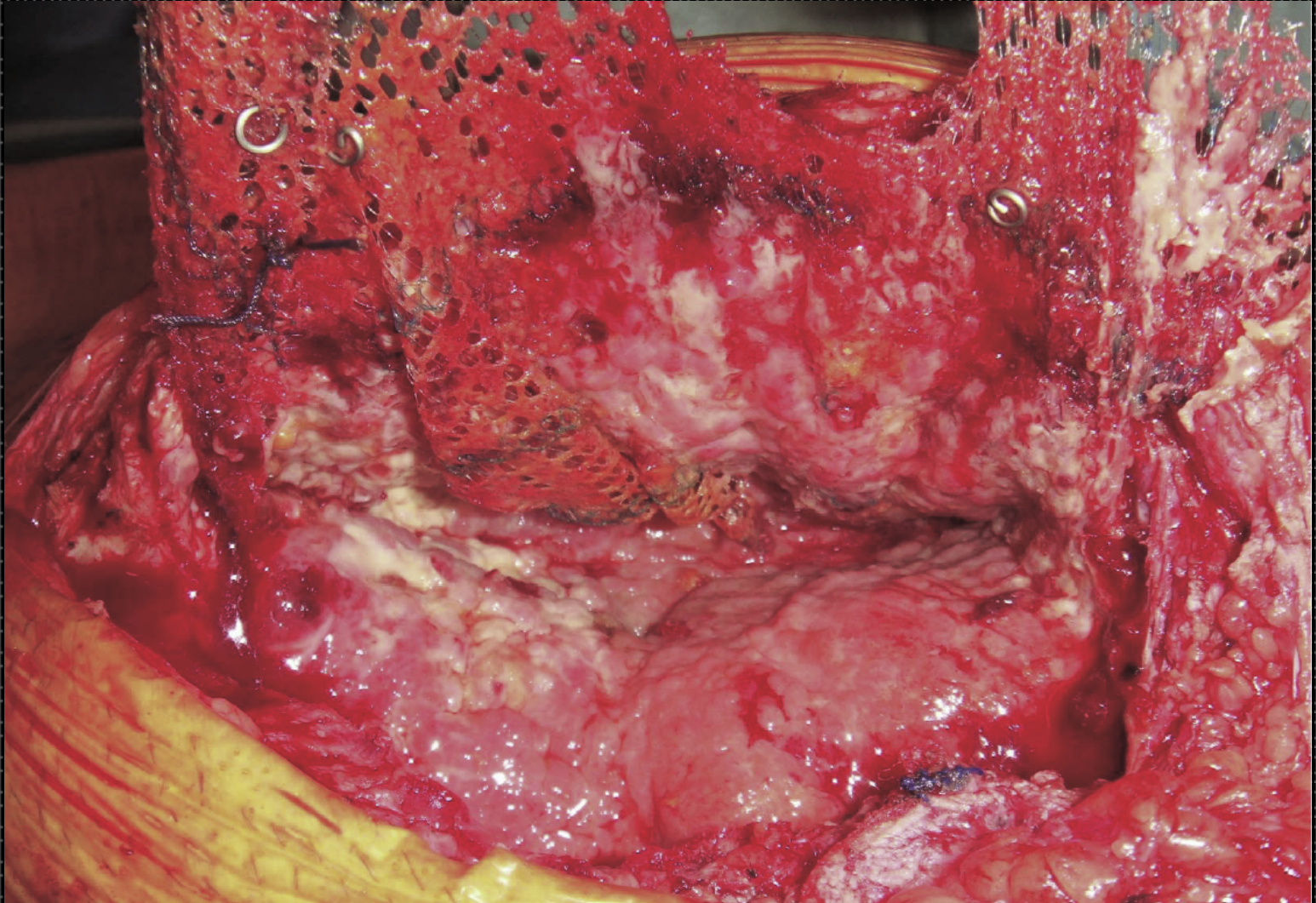
ADHERENCES POST-OPERATOIRES (1)



BRIDES



COMPLICATIONS GRAVES



ADHERENCES

Hernia. 2011 Oct;15(5):553-8. doi: 10.1007/s10029-011-0826-9. Epub 2011 May 19.

Evaluation of absorbable and permanent mesh fixation devices: adhesion formation and mechanical strength.

Byrd JF, Agee N, Swan RZ, Lau KN, Heath JJ, Mckillop IH, Sindram D, Martinie JB, Iannitti DA.

Section of Hepatopancreatobiliary Surgery, Department of General Surgery, Carolinas Medical Center, Morehead Medical Plaza, Suite 300, 1000 Blythe Blvd., Charlotte, NC 28203, USA.

Surg Endosc. 2010 Jun;24(6):1318-24. doi: 10.1007/s00464-009-0767-x. Epub 2009 Dec 24.

Tensile strength and adhesion formation of mesh fixation systems used in laparoscopic incisional hernia repair.

Hollinsky C, Kolbe T, Walter I, Joachim A, Sandberg S, Koch T, Rülicke T, Tuchmann A.

Department of Surgery, SMZ Floridsdorf, Hinaysgasse 1, Vienna 1210, Austria. hollinsky@aon.at

DOULEUR CHRONIQUE

✘ « Docteur, j'ai toujours mal !! »



DOULEUR POST-OPERATOIRE

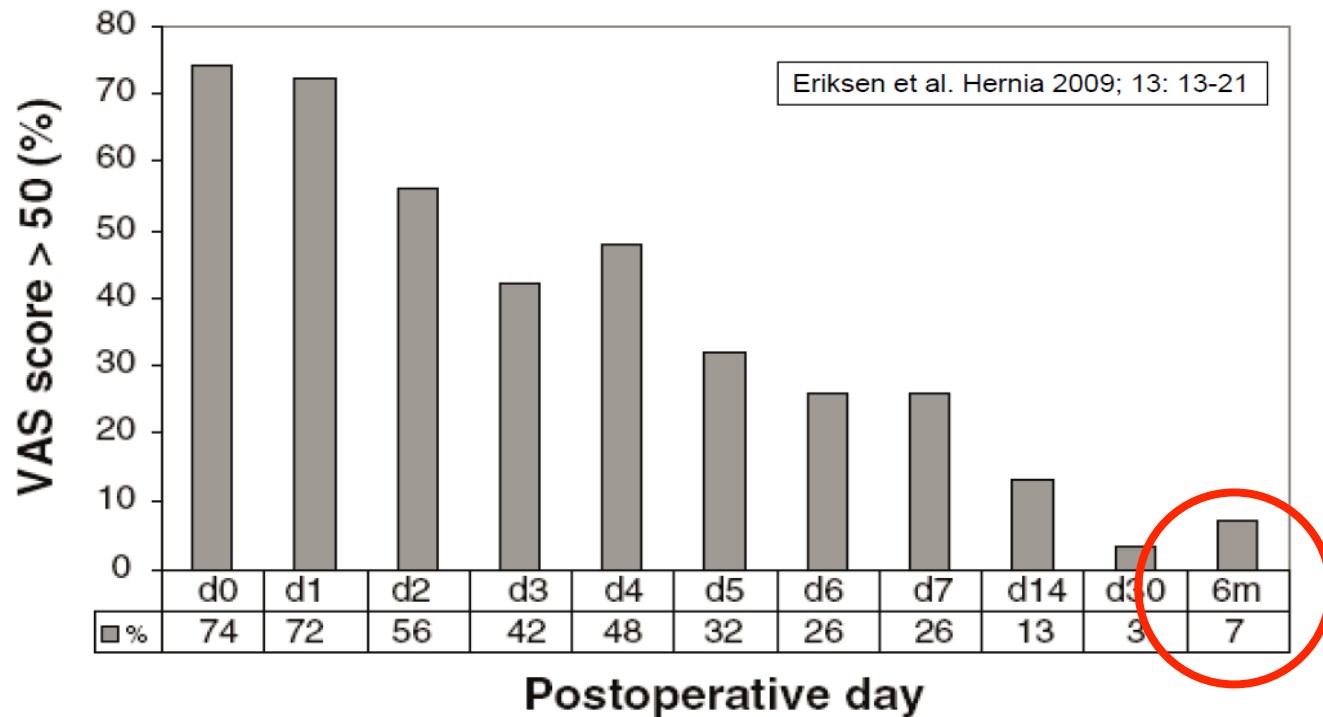
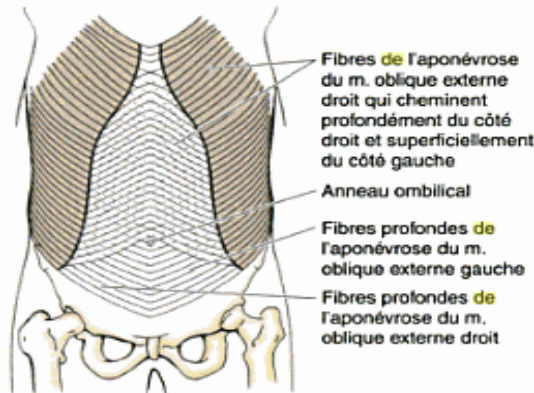
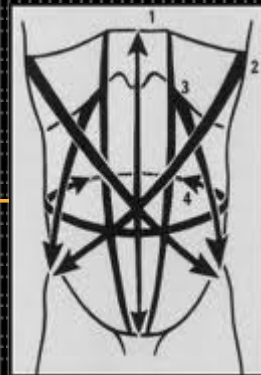
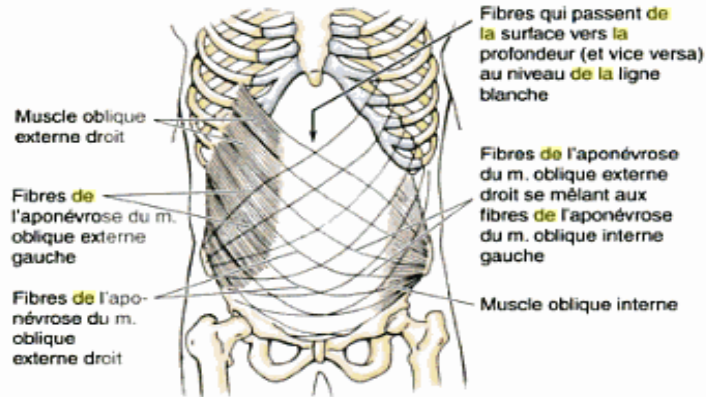


Fig. 2 Ratio (%) of patients reporting VAS-pain ≥ 50 during activity at any time in the postoperative period

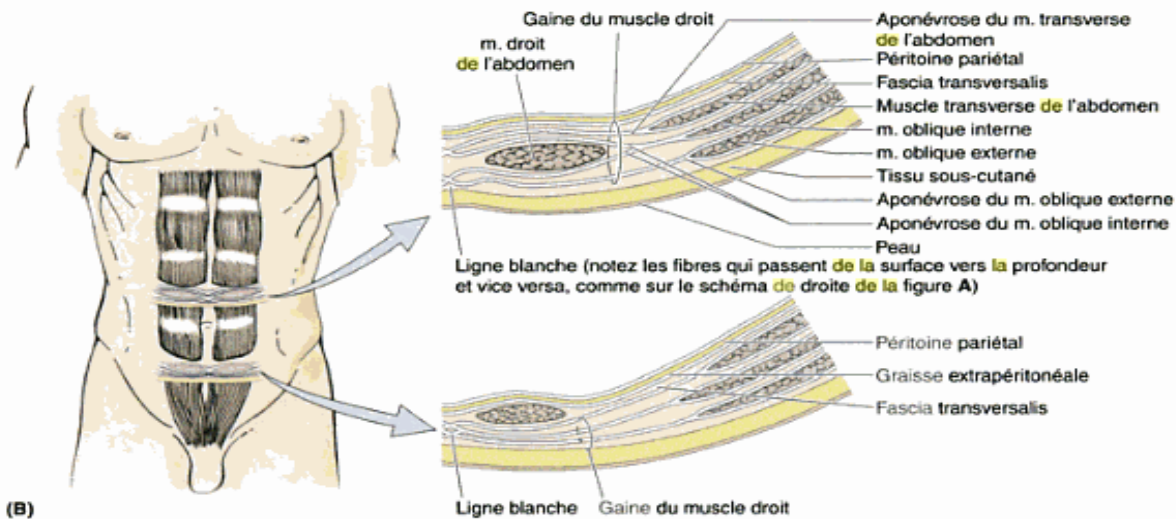
ARCHITECTURE ABDOMINALE



(A) Echange intramusculaire de fibres superficielles et profondes au sein des aponeuroses des muscles obliques externes controlatéraux.

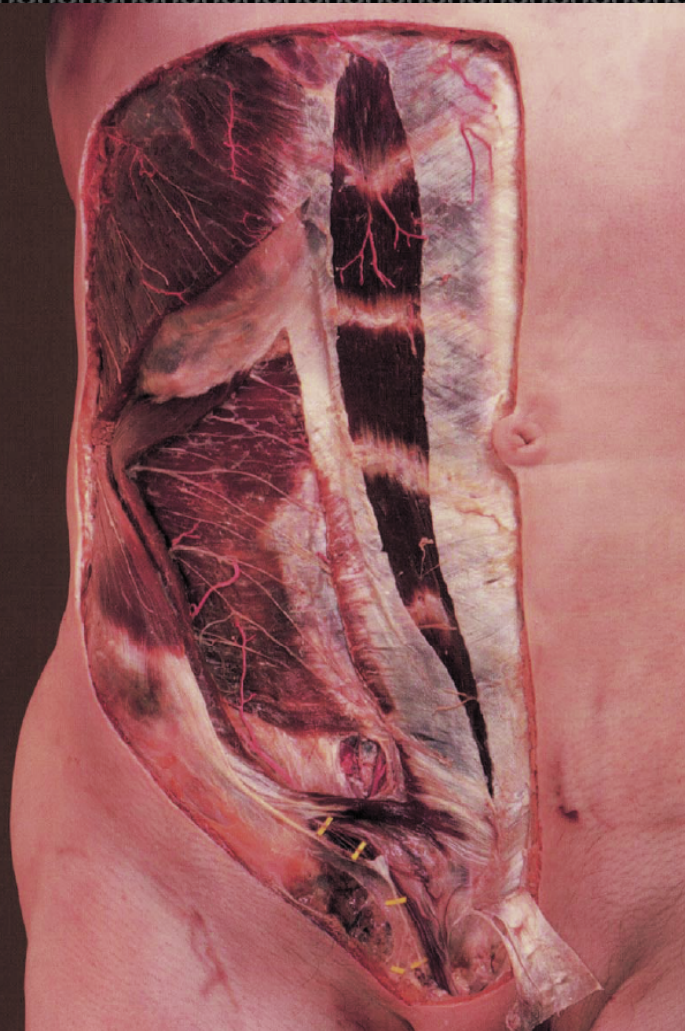


Echange intermusculaire de fibres entre les aponeuroses des muscles obliques externes et internes controlatéraux.



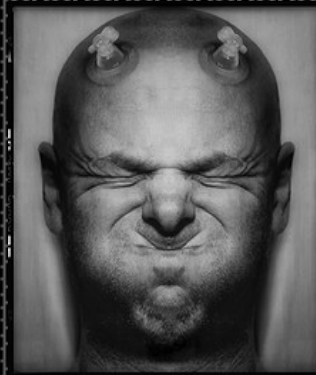
(B)

INNERVATION ABDOMINALE



FIXER...

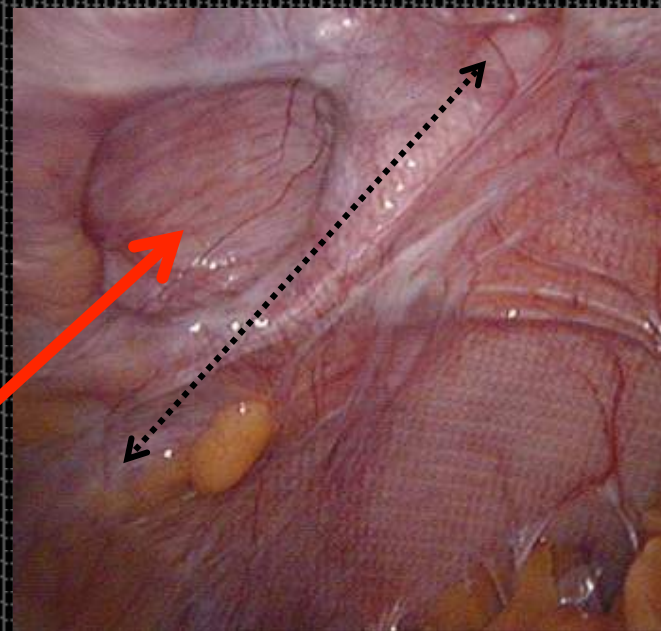
- ✗ ...ça fait mal
- ✗ ...ça prolonge éventuellement l'hospitalisation
- ✗ ...ça peut être source de douleur chronique
- ✗ ...ça peut perdre son efficacité
- ✗ ...ça génère des adhérences
- ✗ ...ça peut entraîner occlusion, perforation
- ✗ ...ça coûte
- ✗ ...ça...



DEUX RAISONS DE FIXER

- ✘ Stabilisation initiale avant l'engluement tissulaire
- ✘ Prévention de la rétraction secondaire et du shrinkage
- ✘ Sinon

RECIDIVE !



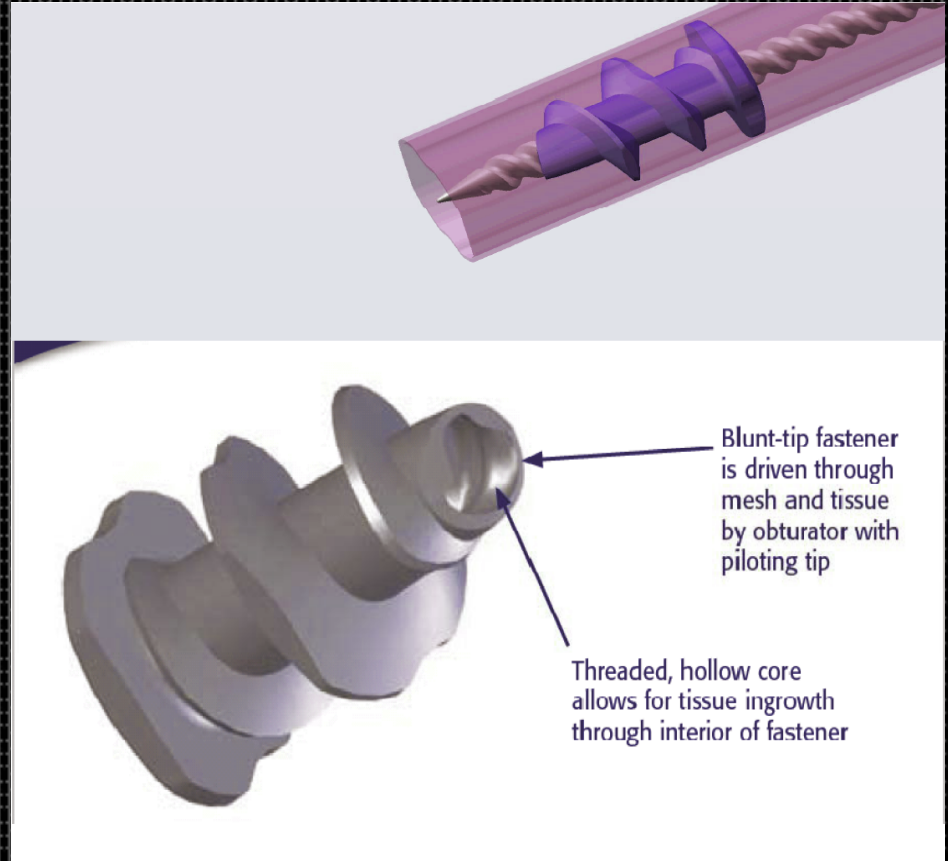
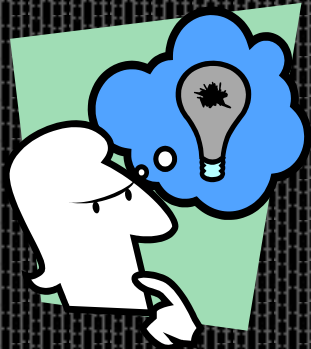
MAILLES À LARGES PORES

- ✘ Suffisamment solides (seuil 450N / 150 N)
- ✘ Déclenchant une intégration mieux contrôlée
- ✘ Limitent l'effet de shrinkage et l'overlap
- ✘ Autorisent le recours à une fixation résorbable

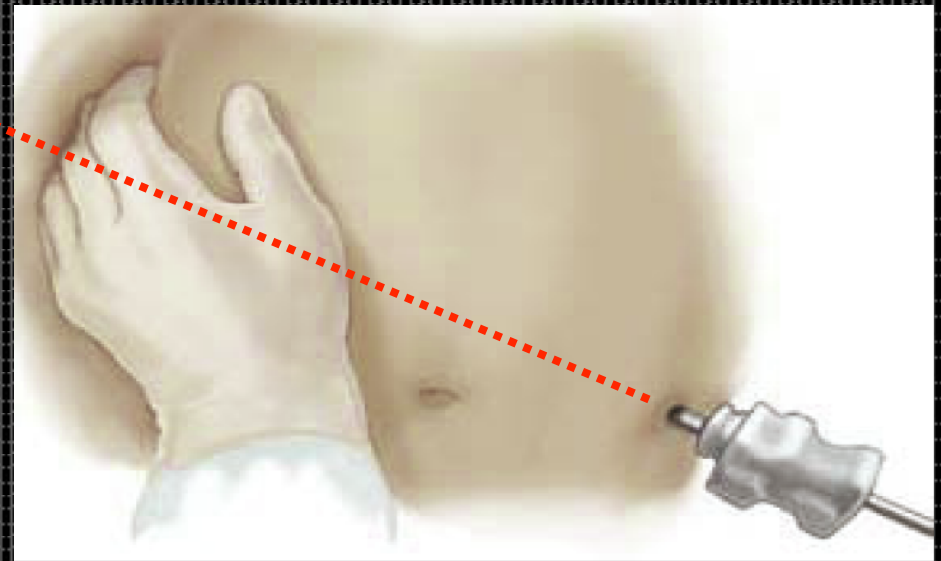
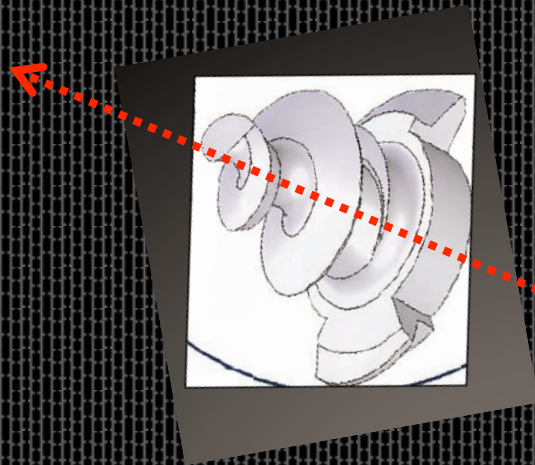


PENETRATION SPIRALEE

- ✘ Compression tissulaire
- ✘ Entortillement pariétal
- ✘ Entrappement nerveux



CONTRE-PRESSION MANUELLE

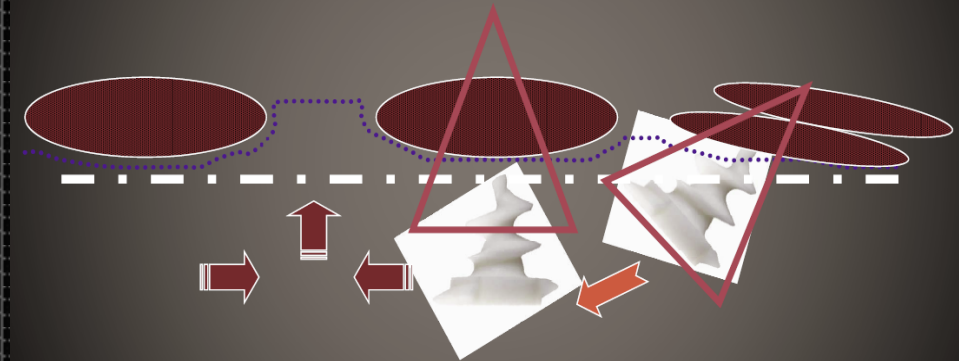
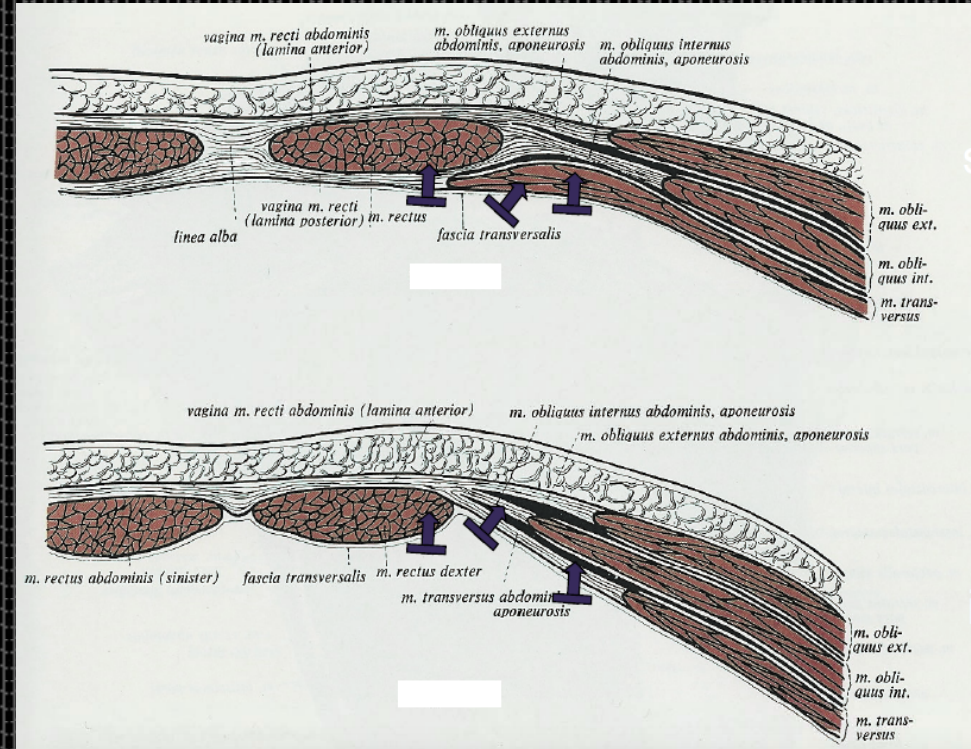
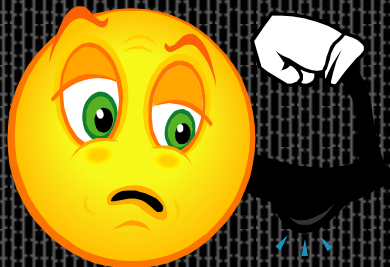


LE PATIENT IDEAL...



LA FIXATION DIFFICILE

- ✘ Accès anatomique
- ✘ Poss. contre-pression
- ✘ Degré angulation
- ✘ Pouvoir pénétration
- ✘ Qualité ancrage
- ✘ Longueur jambage



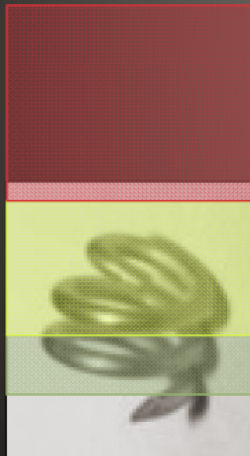
LA LONGUEUR D'ANCRAGE

3,8 mm

4,1 mm

6,4 mm

6,8 mm



Protack



Absorbatack



Easy tack



Sorbafix

Muscle & fascia

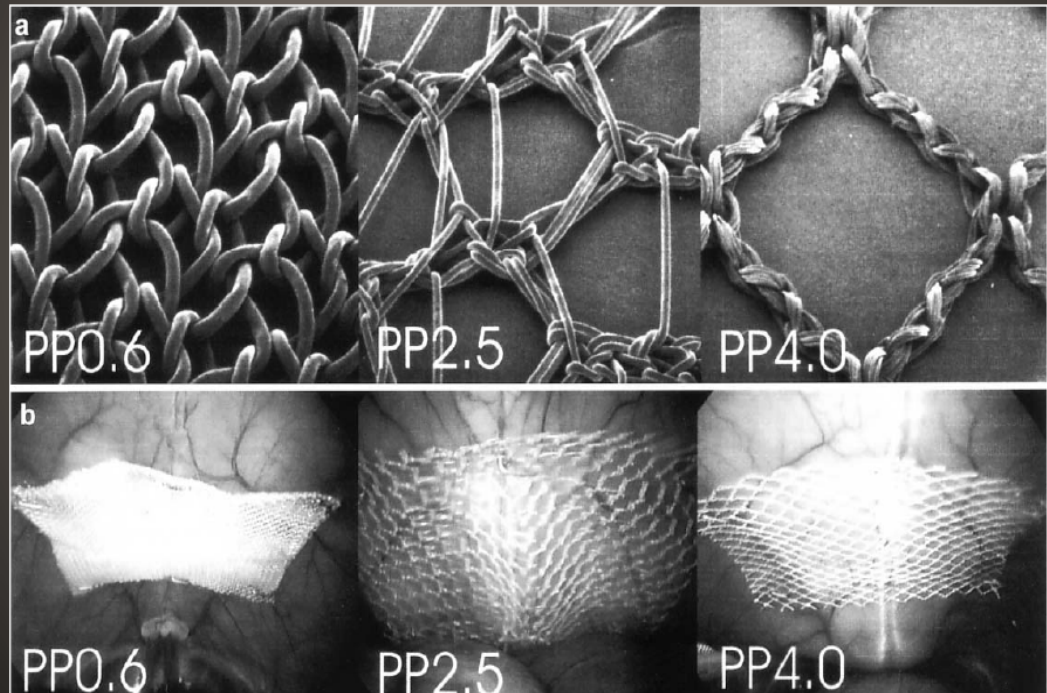
Fat

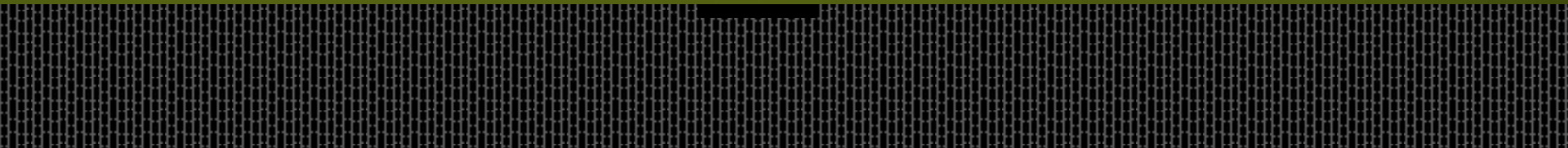
Mesh

LES NOUVELLES PROTHESES

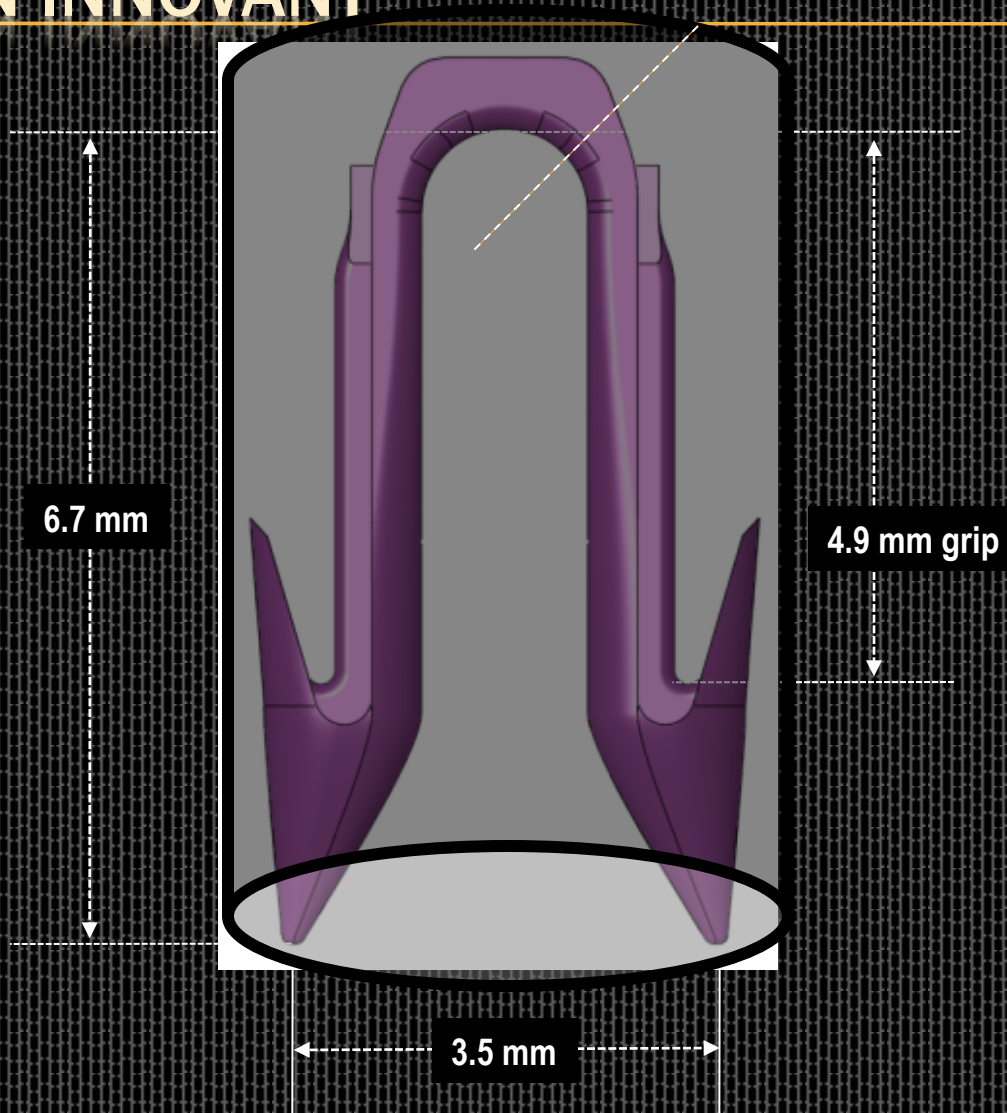
Poresize

PP=polypropylene



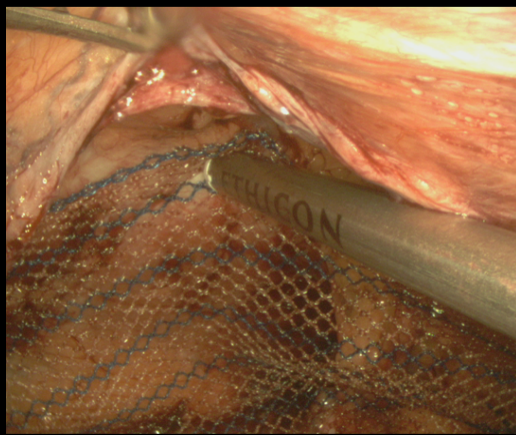


UN DESIGN INNOVANT



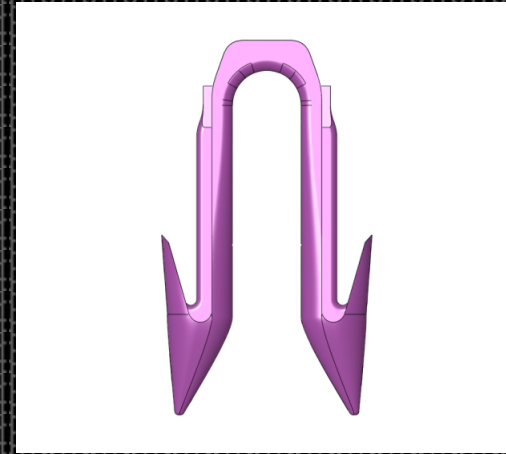
SECURESTRAP

- ✘ Barette, bride, bretelle, lien...
- ✘ Pansement...
- ✘ To strap: attacher...



SECURESTRAP: AVANTAGES A PRIORI

- ✘ Deux points de fixation en pont
 - + Adapté aux larges mailles
- ✘ Des pointes émoussées
 - + Limitation de l'agression tissulaire
- ✘ Une platine de base non saillante
 - + Minoration du risque érosif et adhésiogène
- ✘ Des jambages de 6,7mm
 - + Assurant un ancrage fiable en cas d'adiposité



2 POINTS DE FIXATION POUR AGRAFER UNE PLUS GRANDE VARIETE DE PROTHESES



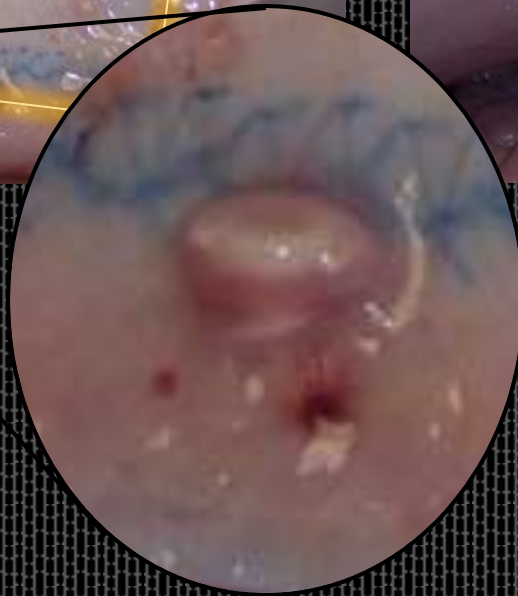
Wide pore mesh



PROFILE AND SURFACE MASS with ETHICON SECURESTRAP™



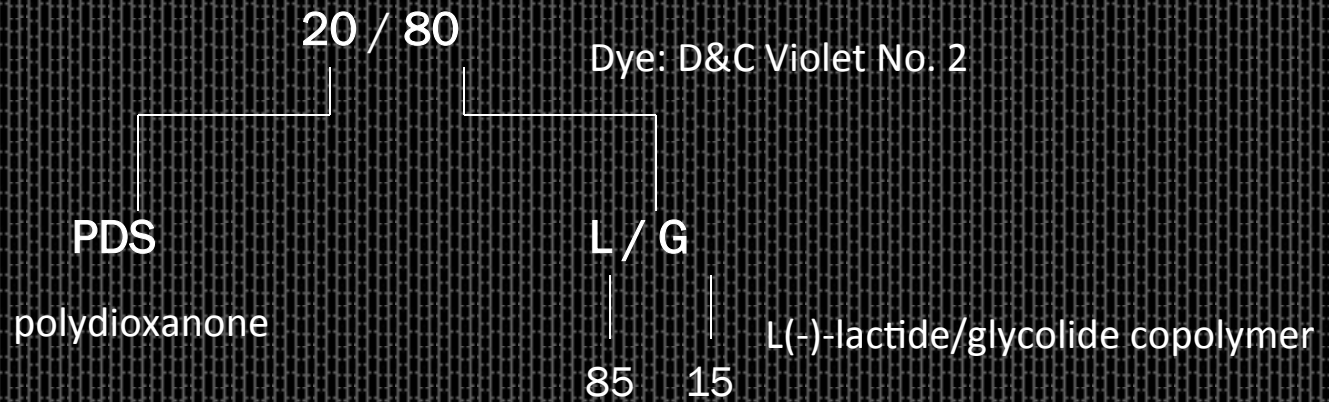
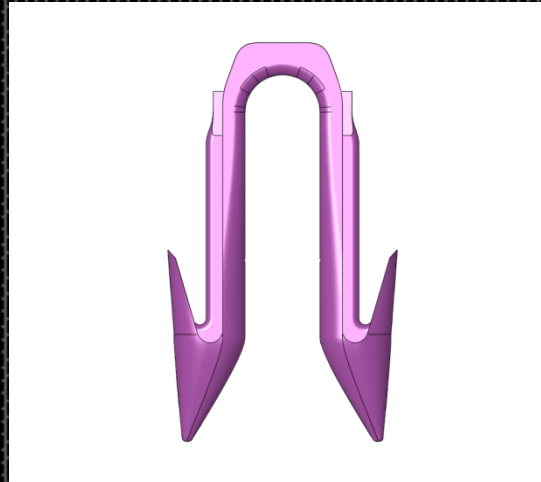
Spiral fixation



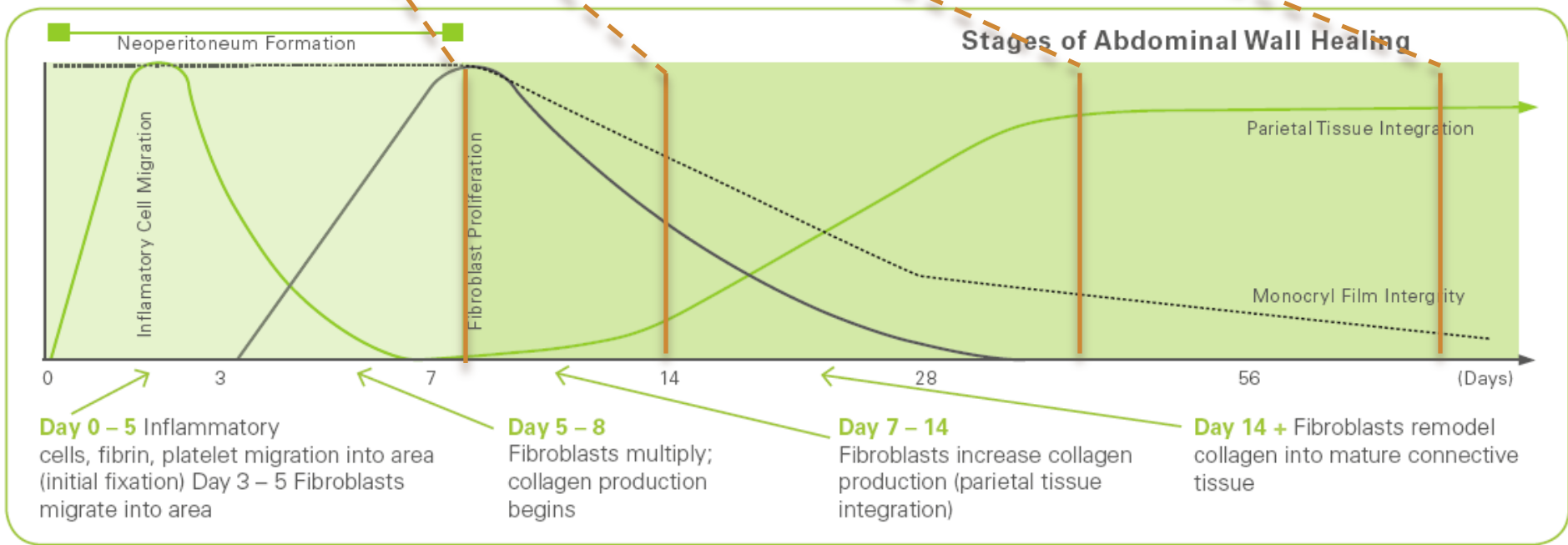
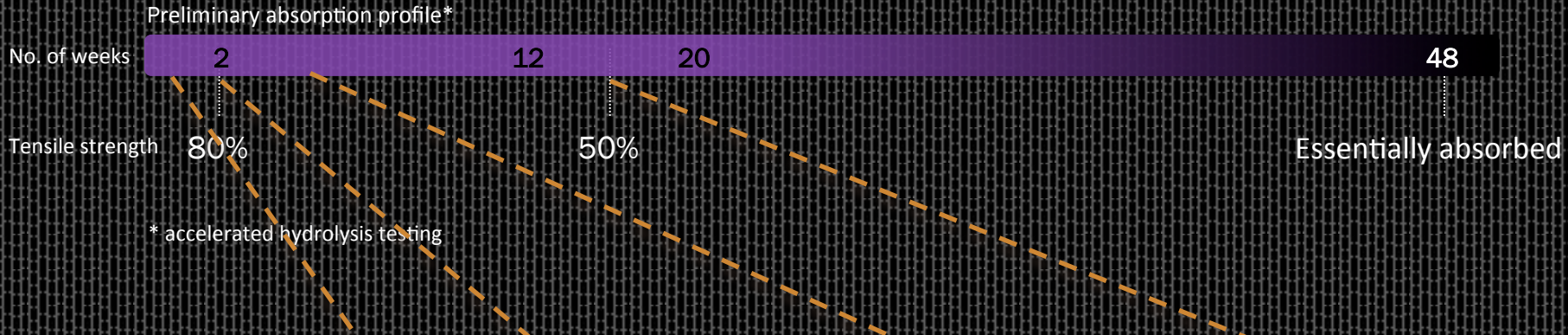
ETHICON SECURESTRAP™

5 mm Absorbable strap fixation device

COMPOSITION DU COPOLYMERE



PROFILE DE RESORPTION

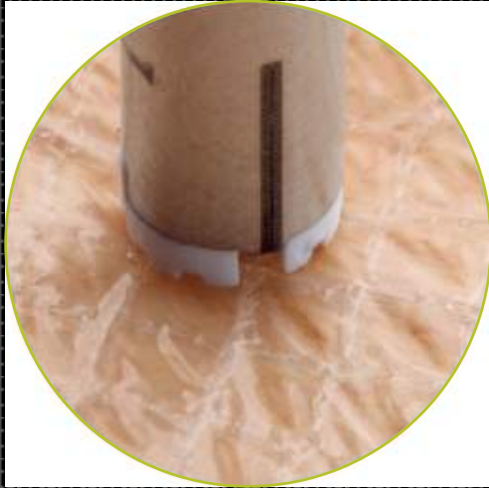


SECURESTRAP: AVANTAGES OBSERVES

- ✘ Ergonomie satisfaisante
- ✘ Repère d'orientation axiale utile
- ✘ Charge en agrafes normalement suffisante
- ✘ Indicateur de « réserve d'agrafes »
- ✘ Pénétration tissulaire effective
 - + Y compris dans le Cooper
- ✘ Ejection élastique constante
 - + En limitant le recours à la contre-pression



MARQUAGE DE POSITIONNEMENT



INDICATEUR D'AGRAFES RESTANTES



5 straps remaining



2 straps remaining



Empty



SYSTEME DE PROPULSION A RESSORT

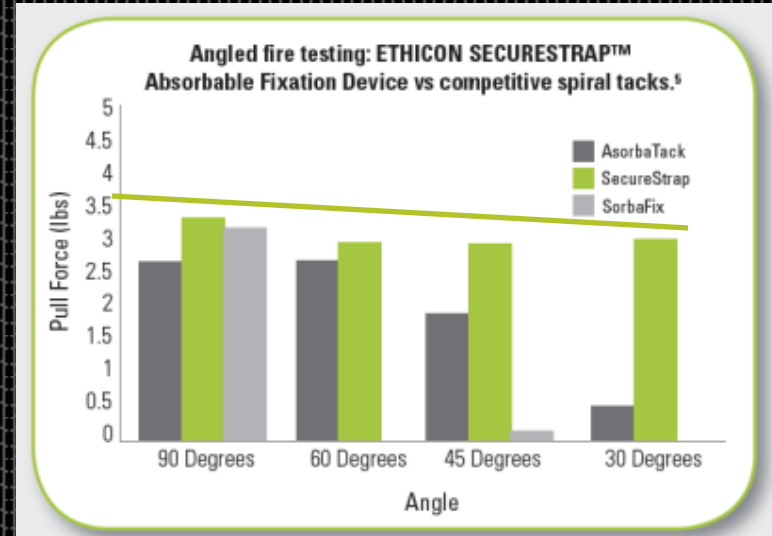
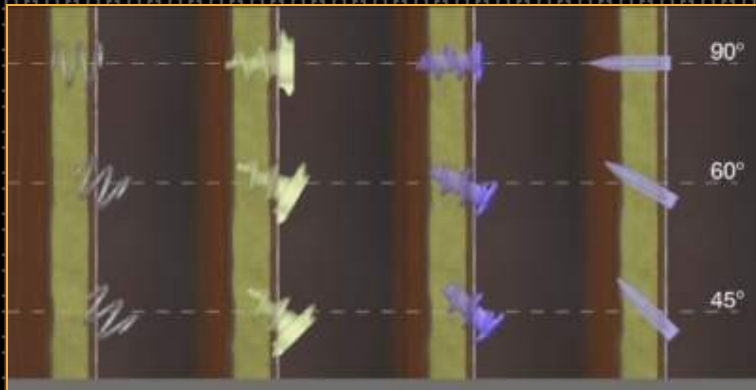


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COMPARATIF

	Protack	Absorbatack	Permasorb	Sorbafix/Permafrix	ETHICON SECURESTRAP™
Company	Covidien	Covidien	Bard / Davol	Bard Davol	ETHICON
Construct					
Total length	3.3 mm	5.1 mm	6.08 mm	6.7 mm	7.2 mm
Profile	~.4 mm	1 mm	~.3 mm	~.85 mm	.5 mm
Material	Titanium	PGLA	PDLLA	PDLLA	PLG Blend
Delivery	5 mm	5 mm	5 mm	5 mm	5 mm
Method of delivery	Spiral	Spiral	Needle introducer	Spiral Needle introducer	Expulsion
# of tacks	30	10, 20	5, 12	15, 30	25
Penetrate Cooper's	Yes	Yes	No	Yes	Yes

EXCELLENTE MISE EN PLACE DE L'AGRAFE QUELQUE SOIT L'ANGLE DE FIXATION*1



Low profile & small surface area

Superior holding strength

* 1. 510K Testing for ORION Mesh Fixation Strength (AST-2009-0312). 2. Angle Fire Competitive Testing (AST-2010-0199) 3. 28-Day Mesh Fixation Study of the ORION Device to Evaluate Mesh Migration and Tissue Response Using a Swine Model (PSE Accession Number 09-0132).

CLUB HERNIE



N= 590

POUR LES COMMANDES...



Code Produit	Description	Unités
STRAP25	Système de fixation à usage unique avec 25 agrafes résorbables (5mm)	6 unités / boîte